



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of : Examiner:  
JEROME R. MAHONEY : MING CHOW  
Serial No. 09/653,658 : Art Unit: 2645  
Filing Date: August 31, 2002 : Attorney Docket No.  
For: VOICE ACTIVATED/VOICE : IVC-103A  
RESPONSIVE ITEM LOCATOR

Commissioner for Patents.  
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APPEAL BRIEF

This brief is being filed in response to the Final Rejection of January 2, 2004 in the above-referenced case.

I. REAL PARTY IN INTEREST

The inventor of the instant patent application is Jerome R. Mahoney. Stated inventor has assigned all rights in the instant patent application to iVoice, Inc. The assignment has been forwarded to the United States Patent and Trademark Office on August 31, 2002 for recordation.

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## II. RELATED APPEALS AND INTERFERENCES

There are no related appeals and no related interferences. There was an appeal filed in this application on March 14, 2003. In response, the Examiner withdrew prior rejections and negated the appeal. That appeal was, therefore, withdrawn by the United States Patent and Trademark Office, and the Examiner subsequently advanced new rejections in his Office

Action of July 9, 2003.

## III. STATUS OF CLAIMS

The following is a list of all claims that have been presented in this application throughout its history and the status of these claims:

<u>Claims</u>	<u>Status</u>
1-10	Initially filed, now cancelled.
11-30	Filed by amendment, appealed, now cancelled.
31-50	Pending, under final rejection - these are the appealed claims. They are presented in Exhibit A attached hereto.

#### IV. STATUS OF AMENDMENTS

No amendments were filed after the Final Rejection.

#### V. SUMMARY OF THE INVENTION

In conjunction with this section, Figure 1 is attached hereto as Exhibit B, and is referred to in the numbering of the elements. The present invention is directed to a voice activated/voice responsive item locator. The figure selected shows general software features and functional features. Thus, the present invention device includes a central processor 1, which may be an internal or external component, i.e. within a single unit or at a separate location from audio receivers and transmitters.

The system may be preprogrammed with a user being required to follow concise instructions for activation and operation, or may be programmable to alter, add or enhance ease or methods of use. A limited access code for manager input 3 of user instructions may be required for security checks. In any event, manager inputs 3 shall include functional selections and inputs of items and their locations, with provision for subsequent access for

modifications.

The programming of the manager inputs 3 may include direct keyboard, voice, etc. Security capabilities may include voice identification or user security code systems. Once the system has been programmed for use, the user operation unit(s) 5 provide functional access, which may be passive wherein a user performs some operation to activate the system, or may be active wherein an internal mechanism may automatically activate the system.

Once the system has been activated and a user has stated the necessary words of input to activate the device, recognition/non-recognition response 7 results from processing the user inputs to central processor 1. Audio and video response unit(s) 9 provide feedback 11 to the user, either by answering the inquiry, conditionally defaulting by asking for a repeat or a restate of the question, or fully defaulting by directing a user to another location to obtain help form an individual.

The voice activated/voice responsive item locator system present invention enables a user to speak into the system and have the system respond with location information for an item requested by the user.

## VI. ISSUES

The basic issues are as follows:

- (a) Are claims 31 through 33, 35, 39 and 46 obvious under 35 USC 103(a) over Engellenner in view of Baker et al? Would one of ordinary skill in the art find the present invention as claimed in these claims obvious notwithstanding the shortcomings of Engellenner and would one of ordinary skill in the art combine the teachings of Engellenner with Baker et al as set forth in the rejection?
- (b) Are claims 34 and 40 obvious under 35 USC 103(a) over Engellenner in view of Perrone et al? Is the examiner correct in stating that it is old and well known to one skilled in the art that boot strap instructions include diagnostics and system programming, as claimed herein, without support in the prior art references of Engellenner and Perrone et al? Is the examiner appropriate in the relying on Baker et al in the rejection of claim

40 discussion when it is not cited in the rejection at the beginning of part 2 as a primary, secondary, or tertiary reference?

- (c) Is claim 36 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Semple et al? Is Semple et al non-analogous prior art with respect to Engellenner? Do the teachings of Semple et al overcome the shortcomings of Engellenner and Baker et al?
- (d) Is claim 37 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Semple et al and Wortham? Is Semple et al and Wortham non-analogous prior art with respect to Engellenner? Do the teachings of and Wortham overcome the shortcomings of Engellenner, Baker et al and Semple et al?
- (e) Is claim 38 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Martin? Is Martin non-analogous prior art with respect to Engellenner? Do the teachings of

Martin overcome the shortcomings of Engellenner and Baker et al?

- (f) Are claims 41 through 43 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further when of Cohen et al? Does Cohen et al overcome the shortcomings of Engellenner and of Baker et al? Is Cohen analogous art to be combined with Engellenner and Baker et al?
- (g) Is claim 344 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Reed? Is Reed non-analogous prior art with respect to Engellenner? Do the teachings of Reed overcome the shortcomings of Engellenner and Baker et al?
- (h) Is claim 45 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Radicon? Is Radicon non-analogous prior art with respect to Engellenner? Do the teachings of Radicon overcome the shortcomings of Engellenner and Baker et al?

- (i) Is claim 47 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Bandara? Is Bandara non-analogous prior art with respect to Engellenner? Do the teachings of Bandara overcome the shortcomings of Engellenner and Baker et al?
- (j) Are claims 48 through 50 obvious under 35 USC 103(a) over Engellenner in view of Baker et al and further in view of Gupta et al? Is Gupta et al non-analogous prior art with respect to Engellenner? Do the teachings of Gupta et al overcome the shortcomings of Engellenner and Baker et al?

VII. GROUPING OF CLAIMS

In this appeal, claims 31 through 40, and 46 through 50 are directed to an item locator system with hardware and software to support both voice activation and voice responsive capabilities for location feedback to locate one or more specific goods in a retail store.

Claims 41 through 43 are directed to an item locator

system with hardware and software to support both voice activation and voice responsive capabilities for location feedback to locate aisle number and shelf location.

Claim 24 is directed to an item locator system with hardware and software to support both voice activation and voice responsive capabilities for location feedback to locate bin number location.

Claim 45 is directed to an item locator system with hardware and software to support both voice activation and voice responsive capabilities for location feedback to locate row and slot location.

These above four groupings are recommended by the Applicant for purposes of appeal.

#### VIII. ARGUMENTS

##### (a) Claim Rejection - 35 U.S.C. §103 (a) Engellenner in view of Baker et al Rejection

Claims 31 through 33, 35, 39, and 46 are rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining

references that would not be combined due to the diverse purposes and teachings. First , the primary reference to Engellenner does not teach a continuous speech recognition digital signal processor as claimed in the present application. The digital signal processor of the present invention captures tokens of raw acoustic signals of utterances and compares them against a set of models, and uses statistical likelihood to interpret them. This matching then results in feedback to the user to give the location of products in a retail environment. The present invention does not involve tagged products like Engellenner, does not signal out to products and receive feedback to locate the products like Engellenner, and does not create zones to identify the product location like Engellenner. The present invention tells a user where an item is in the sense of where it is supposed to be, and is based on an inputted, stored directory. Further , the present invention uses a DSP, as set forth in all claims, whereas Engellenner uses FFT circuit in a different manner. The present invention uses tokens of utterances, whereas Engellenner uses strictly a succession of times to capture signals.

Also, as the Examiner indicates, Engellenner fails to

teach a memory storage means for voice recognition vocabulary for storage of command match. In fact, on page 7 of the examiner's Office Action, Engellenner fails to teach inputting location data.

The secondary reference to Baker et al fails to overcome the numerous deficiencies of Engellenner set forth above. Additionally, while the examiner indicates in the rejection that it would be obvious to modify Engellenner by substituting the teachings of Baker et al as to memory storage means, there is no reason to do so, as Engellenner has no need for memory storage means for voice recognition vocabulary for storage of command match.

Even more significantly, the examiner's representations of the Baker et al patent teachings seem to be in error. The examiner believes that Baker et al in columns 21 and 22 teaches storage of command match. But Baker et al is specifically storing only originally active vocabulary.

Thus, Engellenner is deficient in numerous areas, Baker et al does not overcome these deficiencies, and Baker et al also is short in its teachings. Further, Engellenner is not directed to a directory type locator but rather an actual location locator moreso a finder system. Hence, it has a different purpose and accomplishes that purpose in a

different manner.

(b) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Perrone et al Rejection

Claims 34 and 40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Engellenner in view of Perrone et al. All of the deficiencies of Engellenner stated above in section (a) are repeated and incorporated herein. Also note that Baker et al is not used in this rejection even though these are dependent claims from the Baker et al rejected claims. Further, the Examiner states that because Perrone teaches a non-volatile memory such as a ROM to store bootstrap instruction, the flash memory claimed, as well as remote diagnostics and systems programming is old and therefore obvious. It is the examiner who is bootstrapping, as the assumptions and extrapolations are incorrect. ROM storage of bootstrapping instruction in no way implies or teaches remote diagnostics, as claimed.

Also, the Perrone reference is different art from the present invention. Second, there is no suggestion, teaching or need, expressed or implied, in either the Engellenner patent or the Perrone to utilize the teachings of the other.

Third, the Perrone disclosure teaches away from the present invention. And fourth, even if the combination were valid, the combination of the teachings of the two inventions would produce an object, which is different from the present invention.

First, the Perrone reference is different art from the present invention. The Perrone art is directed to voice control of a server for ordering products through the Internet where virtual presentation occurs. The types of products that are classified are retrieved in broad categories. For example, in response to a request for a class of rooms, all rooms having a given rate are diagrammed (col. 19, lines 33 -35). The disclosure has no way of finding the location of a given room. Moreover, there is a many to one ratio of what is located for a specific inquiry. On the other hand, the present invention is directed to the location of specific consumer products. As stated in the specification, "(b)y item is meant a place or thing that a user desires to locate" page 30, lines 1-2. This is different from a class of items, wherein Webster's Ninth Collegiate Dictionary defines class as "a group, set, or kind sharing common attributes." Thus, the Perrone disclosure involves broad classifications that do not show

the location of a specific person or product, much less a consumer product. Therefore, the Perrone patent is different art from the present invention.

Second, there is no suggestion, teaching or need, expressed or implied, in either the Perrone patent or the Engellenner patent to utilize the teachings of the other. The Perrone patent has its own Functional Natural Language Phrase Interactive Voice Response System, by using an "IVR application program 42 under control of OS 40 . . . is responsible for . . . receiving and interpreting caller inputs and responding to caller inputs" col. 7 lines 21 through 26. Thus, there is no motivation or reason to substitute any of the Perrone teachings in Engellenner.

Third, the Perrone disclosure teaches away from the present invention. In finding locations, it is inherent that the Perrone disclosure uses databases that are retrievable by class or category. The Perrone system asks questions based upon category of hotel and room rates. When a user selects category, a diagram of the hotel's rooms based upon rate selection, is displayed. Thus, all rooms of a specified class are displayed. However, the present invention is directed more toward a single display of a location. When a user requests coffee, a specific

location for coffee is provided. The present invention is primarily for locating items, i.e., it uses item databases which correlate an item with a specific location for a user to view, retrieve or purchase a product. Thus the Perrone patent teaches away from the present invention of locating specific items.

And fourth, even if the combination were valid, the combination of the teachings of the two inventions, nevertheless, would produce a system, which is different from the present invention. The Perrone disclosure teaches broad locations of a class of rooms wherein many rooms are located for a specific inquiry. The present invention relates to a specific location for an item. The combination of Perrone and Stuble et al., even if it were valid, would return locations of object by class. For example, all vegetables that are yellow might be located under the combination of the two references. However, the location of canned corn would not be specifically located under the combination of the two references. Thus, if the combination of the two disclosures were used, there would be many locations returned in a specific inquiry, and with an auditory response of the present invention, would be difficult for a user to process. Therefore, the combination

of Perrone and Stuble et al. would produce a system, which is different from the present invention.

Further Perrone fails to teach a continuous speech recognition utilizing tokens of raw acoustic signals representing utterances or words and matches these against a set of models and then relies upon likelihood to select a most likely model to decode signals for interpretation.

The Applicant submits that the combination of Engellenner and et al. fails to establish a prima facie showing of obviousness for all of the above reasons. (Because the examiner used Perron et al extensively in prior rejections that were withdrawn after the first appeal, the above detailed response on Perrone is given to discourage the examiner from withdrawing and rejecting yet again.)

(c) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Baker et al and Semple et al Rejection

Claim 36 is rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies

and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated.

As mentioned, Engellenner does not teach a continuous speech recognition digital signal processor as claimed in the present application. The digital signal processor of the present invention captures tokens of raw acoustic signals of utterances and compares them against a set of models, and uses statistical likelihood to interpret them.

This matching then results in feedback to the user to give the location of products in a retail environment. The present invention does not involve tagged products like Engellenner, does not signal out to products and receive feedback to locate the products like Engellenner, and does not create zones to identify the product location like Engellenner. The present invention tells a user where an item is in the sense of where it is supposed to be, and is based on an inputted, stored directory. Further , the present invention uses a DSP, as set forth in all claims, whereas Engellenner uses FFT circuit in a different manner. The present invention uses tokens of utterances, whereas Engellenner uses strictly a succession of times to capture signals.

Also, as the Examiner indicates, Engellenner fails to teach a memory storage means for voice recognition vocabulary for storage of command match.

The secondary reference to Baker et al fails to overcome the numerous deficiencies of Engellenner set forth above. Additionally, while the examiner indicates in the rejection that it would be obvious to modify Engellenner by substituting the teachings of Baker et al, there is no reason to do so, as Engellenner has no need for memory storage means for voice recognition vocabulary for storage of command match. Even more significantly, the examiner's representations of the Baker et al patent teachings seem to be in error. The examiner believes that Baker et al in columns 21 and 22 teaches storage of command match. But Baker et al is specifically storing only originally active vocabulary.

Semple et al is relied upon to show input of location data. However, Semple is no different from a yellow pages or business phone directory in that it gives geographical locations of places, businesses or where you may obtain products or services. It basically gives map locations or addresses based on category selections of a user. Data is inputted, but not to locate a specific item in a retail

store, as in the claimed invention herein. Thus, this reference does not overcome the shortcomings of the other references. Further, because Semple et al is directed to a different purpose, namely a directory of geographical locations, rather than a radio tag item by item actual finder of Engellenner, and because Engellenner has no use for inputted data of the type suggested by Semple et al, it would not even be appropriate to combine these references.

Thus, Engellenner is deficient in numerous areas, Baker et al does not overcome these deficiencies, and Baker et al also is short in its teachings. Further, Engellenner is not directed to a directory type locator but rather an actual finder system. Hence, it has a different purpose and accomplishes that purpose in a different manner. Likewise, the tertiary reference to Semple et al is directed to yet a different purpose, achieved in a diofferent manner and should not be combined with the other refenrences. If it were combined, then the Engellenner system would have store locations, geographical and map locators and category selections, and would still not contain the required inputs set forth in the present invention as claimed.

(d) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Baker et al, Semple et al and Wortham

Rejection

Claim 37 is rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al and the tertiary reference to Semple et al are set forth above in section (a) and section (c) are repeated.

The fourth reference to Wortham is cited to show the use of a keyboard and menu for programming. This patent is directed to a vehicle finder and not a system for a consumer in a retail store to voice operate a product directory. Engellenner has no need for the input suggested by Wortham, but the results would still not make the present invention obvious for all of the reasons stated.

Thus, Engellenner is deficient in numerous areas, Baker

et al does not overcome these deficiencies, and Baker et al also is short in its teachings. Further, Engellenner is not directed to a directory type locator but rather an actual finder system. Hence, it has a different purpose and accomplishes that purpose in a different manner. Likewise, the tertiary reference to Semple et al is directed to yet a different purpose, achieved in a diofferent manner and should not be combined with the other refenrences. If it were combined, then the Engellenner system would have store locations, geographical and map locators and category selections, and would still not contain the required inputs set forth in the present invention as claimed. The tertiary reference to Wortham adds nothing to overcome all of the deficiencies stated. Thus, this obviousness rejection is improper and should not be sustained.

(e) Claim Rejection - 35 U.S.C. §103 (a) Engellenner in view of Baker et al and Martin Rejection

Claim 38 is rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to

combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated.

The tertiary reference to Martin fails to overcome the shortcomings of the other prior art cited, and, thus this rejection is improper.

(f) Claim Rejection - 35 U.S.C. §103 (a) Engellenner in view of Baker et al and Cohen et al Rejection

Claim 41 through 43 are rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated. The Examiner stated that the first two references failed to teach providing an item aisle and shelf location. He stated that Cohen et al. teaches aisle

number and shelf location being displayed on the display monitor. He determined that it would have been obvious to one skilled in the art at the time the invention was made to modify the Engellenner and Baker et al patent teachings to provide aisle location as taught by Cohen et al. such that the modified system of Perrone would be able to support the aisle and shelf locations to system users. In response, the Applicant submits that the additional combination with Cohen et al. fails to establish a prima facie showing of obviousness for the following reasons. First, the Cohen et al. patent teaches away from the present invention. And second, there is no motivation to combine the art of Engellenner, Baker et al and Cohen.

First, the Cohen et al. patent teaches away from the present invention. While auditory output is taught in Cohen et al., auditory input is not taught, nor would be possible. The nature of the transaction with the main database in the Cohen et al. disclosure is a selection from numerous data sources, which is displayed on computer monitors. The nature of the selections is such that it would be extremely difficult for a user to remember all the selections, which could be made audibly, if it were part of the invention. Thus, Cohen et al. teaches away from auditory presentation

of output of the present invention.

And second, there is no suggestion, teaching or need, expressed or implied, in either the Engellenner or Baker et al patent or the Cohen et al. patent to utilize the teachings of the other. The Cohen et al. patent is directed toward displaying retrieved database information on monitors, wherein a user selects from numerous displays of information one desires. The Cohen et al. patent displays information by department while the Engellenner patent is a wireless finder system. Since Engellenner is a complete system, there would be no motivation to use the system of retail department databases of the Cohen et al. patent, and vice versa.

The tertiary reference to Cohen et al fails to overcome the shortcomings of the other prior art cited, and, thus this rejection is improper.

(g) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Baker et al and Reed Rejection

Claim 44 is rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to

combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated.

The tertiary reference to Reed et al fails to overcome the shortcomings of the other prior art cited, and, thus this rejection is improper.

(h) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Baker et al and Radican Rejection

Claim 45 is rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated.

The tertiary reference to Radican fails to overcome the shortcomings of the other prior art cited, and, thus this rejection is improper.

(i) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Baker et al and Bandara et al Rejection

Claim 47 is rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining references that would not be combined due to the diverse purposes and teachings. First, the deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated.

The tertiary reference to Bandara et al fails to overcome the shortcomings of the other prior art cited, and, thus this rejection is improper.

(j) Claim Rejection - 35 U.S.C. §103 (a) Engellenner  
in view of Baker et al and Bandara et al Rejection

Claim 48 through 50 are rejected on the above references based on a number of erroneous assumptions and erroneous connections made by the Examiner, as well as a hindsight approach to combining references that would not be combined due to the diverse purposes and teachings. First, the

deficiencies and shortcomings of the primary reference to Engellenner and the secondary reference to Baker et al are set forth above in section (a) are repeated.

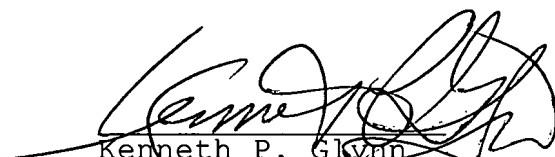
The tertiary reference to Gupta et al fails to overcome the shortcomings of the other prior art cited, and, thus this rejection is improper.

CONCLUSION

The Applicant believes that it should be clear to the Board of Appeals that the currently pending Claims 41 through 50 are allowable because the primary reference to Engellenner fails in many respects, and these shortcomings are not satisfied by the other references relied upon by the examiner. The combinations are inappropriate and even if they were appropriate, they neither suggest nor render obvious the present invention. The rejections under 35 U.S.C. §103(a) should be reversed. The appealed claims are attached hereto as exhibit A while Figure 1 is attached hereto as Exhibit B.

Thank you.

Respectfully submitted,



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EXHIBIT A  
The Appealed Claims

31. An item locator system having both voice activation and voice responsive capabilities for location feedback to locate one or more specific goods in a retail store, which comprises:

a.) a support structure, for physically supporting said system at one or more locations, and functionally containing or connected to the following components:

b.) a continuous speech recognition digital signal processor (DSP), said continuous speech recognition engine utilizes tokens of raw acoustic signals representing utterances or words and matches these against a set of models and then relies upon likelihood to select a most likely

model to decode signals for interpretation;

- c.) a programmable microprocessor interfaced with said speech recognition DSP;
- d.) sufficient programming and circuitry contained within said programmable microprocessor to provide for voice activation and voice recognition and response to provide item location to a user wherein item and location data are defined by manager input to said system;
- e.) voice input means connected to said speech recognition DSP;
- f.) memory storage means connected to said programmable microprocessor for storage of operational inputs, control inputs, voice recognition vocabulary for storage of command match and execute functions;
- g.) at least one user feedback unit and connection

from said programmable microprocessor to said at least one user feedback unit, said at least one user feedback unit adapted to provide feedback selected from the group consisting of audio feedback, visual feedback and combinations thereof, to a user in response to an item location query.

32. The system of claim 31 wherein said user feedback unit includes visual display means for viewing visual feedback in the form of text, or map or a combination thereof.

33. The system of claim 31 wherein said user feedback unit includes sufficient hardware and software to provide audio feedback to a user in response to recognizable voice input.

34. The system of claim 31 wherein said memory storage means further includes flash ROM storage and provides for

remote diagnostics and system programming.

35. The system of claim 31 wherein said voice input means includes a microphone.

36. The system of claim 31 which further includes a secured manual control panel for input and management of item and location data into said system.

37. The system of claim 36 wherein said manual control panel further contains a keypad and menu for operation and programming options, a microphone, a screen for input and feedback display.

38. The system of claim 31 which additional components further includes an audio feedback component which includes audio feedback hardware and software adapter to audibly

respond to recognizable voice input, including digital-to-analog conversion and an output speaker.

39. The system of claim 31 wherein said DSP includes a continuous speech recognition engine having a continuous speech signal recognizer and a continuous speech signal interpreter.

40. The system of claim 31 wherein said programming and circuitry within said programmable microprocessor includes embedded, voice driven interface for control of operational instructions, system locator function operations, and option and default functions.

41. The system of claim 31 wherein said response to provide item location to a user includes aisle location.

42. The system of claim 31 wherein said response to provide item location to a user includes shelf location.

43. The system of claim 31 wherein said response to provide item location to a user includes aisle and shelf location.

44. The system of claim 31 wherein said response to provide item location to a user includes bin number.

45. The system of claim 31 wherein said response to provide item location to a user includes row and slot location.

46. The system of claim 35 wherein said microphone is selected from the group consisting of a receiver handset, headset, and built-in microphone.

47. The system of claim 31 wherein said support structure is a portable support structure.

48. The system of claim 31 wherein said speech recognition engine uses Hidden Markov Models for its continuous speech recognition engine.

49. The system of claim 36 wherein said speech recognition engine uses Hidden Markov Models for its continuous speech recognition engine.

50. The system of claim 38 wherein said speech recognition engine uses Hidden Markov Models for its continuous speech recognition engine.



Exhibit B

